

MAR 23 2009

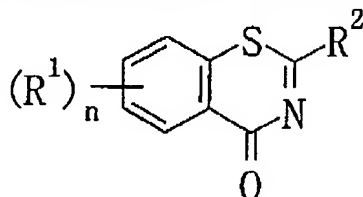
Application No. 10/537,520
Supplemental amendment dated March 23, 2009

Docket No.: 68136(46342)

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) A compound represented by formula:



[wherein, R¹ represents (1) a halogen atom, (2) hydroxyl, (3) nitro, (4) an optionally halogenated C₁₋₆ alkyl, (5) a C₁₋₆ alkyl-carbonyl optionally having 1 to 5 substituents selected from (1') a halogen atom, (2') a C₁₋₃ alkylenedioxy (3') nitro, (4') cyano, (5') a C₁₋₆ alkyl which may be substituted with 1 to 5 halogen atoms, (6') a C₂₋₆ alkenyl which may be substituted with 1 to 5 halogen atoms, (7') a carboxy-C₂₋₆ alkenyl, (8') a C₂₋₆ alkynyl which may be substituted with 1 to 5 halogen atoms, (9') a C₃₋₈ cycloalkyl which may be substituted with 1 to 5 halogen atoms, (10') a C₆₋₁₄ aryl, (11') a C₁₋₆ alkoxy which may be substituted with 1 to 5 halogen atoms, (12') a C₁₋₆ alkoxy-carbonyl-C₁₋₆ alkoxy, (13') hydroxyl, (14') a C₆₋₁₄ aryloxy, (15') a C₇₋₁₆ aralkyloxy, (16') mercapto, (17') a C₁₋₆ alkylthio which may be substituted with 1 to 5 halogen atoms, (18') a C₆₋₁₄ arylthio, (19') a C₇₋₁₆ aralkylthio, (20') amino, (21') a mono-C₁₋₆ alkylamino, (22') a mono-C₆₋₁₄ arylamino, (23') a di-C₁₋₆ alkylamino, (24') a di-C₆₋₁₄ arylamino, (25') formyl, (26') carboxy, (27') a C₁₋₆ alkyl-carbonyl, (28') a C₃₋₈ cycloalkyl-carbonyl, (29') a C₁₋₆ alkoxy-carbonyl, (30') a C₆₋₁₄ aryl-carbonyl, (31') a C₇₋₁₆ aralkyl-carbonyl, (32') a C₆₋₁₄ aryloxy-carbonyl, (33') a C₇₋₁₆ aralkyloxy-carbonyl, (34') a 5- or 6-membered heterocyclic carbonyl, (35') carbamoyl, (36') a mono-C₁₋₆ alkyl-carbamoyl, (37') a di-C₁₋₆ alkyl-carbamoyl, (38') a mono-C₆₋₁₄ aryl-carbamoyl, (39') a 5- or 6-membered heterocyclic carbamoyl, (40') a C₁₋₆ alkylsulfonyl, (41') a C₆₋₁₄ arylsulfonyl, (42') formylamino, (43') a C₁₋₆ alkyl-carbonylamino, (44') a C₆₋₁₄ aryl-carbonylamino, (45') a C₁₋₆ alkoxy-carbonylamino, (46') a C₁₋₆ alkylsulfonylamino, (47') a C₆₋₁₄ arylsulfonylamino, (48') a C₁₋₆ alkyl-carbonyloxy, (49') a C₆₋₁₄ aryl-carbonyloxy, (50') a C₁₋₆ alkoxy-carbonyloxy, (51') a mono-C₁₋₆ alkyl-carbamoyloxy, (52') a di-C₁₋₆ alkyl-carbamoyloxy, (53') a mono-C₆₋₁₄ aryl-carbamoyloxy, (54') nicotinoyloxy, (55') a 5- to 7-

Application No. 10/537,520
Supplemental amendment dated March 23, 2009

Docket No.: 68136(46342)

membered saturated cyclic amino, (56') a 5- to 10-membered aromatic heterocyclic group and (57') sulfo (hereinafter simply referred to as Substituent group A);

(6) a C₂₋₆ alkenyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A;

(7) a C₂₋₆ alkynyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A;

(8) a C₃₋₈ cycloalkyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A;

(9) a C₆₋₁₄ aryl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A;

(10) a C₇₋₁₆ aralkyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A;

(11) a 5- to 14-membered heterocyclic carbonyl containing 1 to 4 hetero atoms, which are 1 or 2 different atoms selected from nitrogen, sulfur and oxygen atoms, in addition to carbon atoms (this heterocyclic carbonyl may have 1 to 5 substituents selected from the Substituent group A);

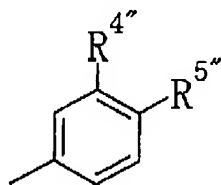
(12) an amino optionally having 1 or 2 substituents selected from (1') a C₁₋₆ alkyl optionally having 1 to 5 substituents selected from the Substituent group A, (2') a C₂₋₆ alkenyl optionally having 1 to 5 substituents selected from the Substituent group A, (3') a C₂₋₆ alkynyl optionally having 1 to 5 substituents selected from the Substituent group A, (4') a C₃₋₈ cycloalkyl optionally having 1 to 5 substituents selected from the Substituent group A, (5') a C₆₋₁₄ aryl optionally having 1 to 5 substituents selected from the Substituent group A, (6') a C₇₋₁₆ aralkyl optionally having 1 to 5 substituents selected from the Substituent group A, (7') a 5- to 14-membered heterocyclic group containing 1 to 4 hetero atoms, which are 1 or 2 different atoms selected from nitrogen, sulfur and oxygen atoms, in addition to carbon atoms, (8') a C₁₋₆ alkyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (9') a C₂₋₆ alkenyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (10') a C₂₋₆ alkynyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (11') a C₃₋₈ cycloalkyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (12') a C₆₋₁₄ aryl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (13') a C₇₋₁₆ aralkyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A and

Application No. 10/537,520
Supplemental amendment dated March 23, 2009

Docket No.: 68136(46342)

(14') a 5- to 14-membered heterocyclic carbonyl containing 1 to 4 hetero atoms, which are 1 or 2 different atoms selected from nitrogen, sulfur and oxygen atoms, in addition to carbon atoms;

R² is a group represented by formula:



(wherein R^{4''} represents hydrogen atom or cyano, and R^{5''} represents hydrogen atom, a C₁₋₆ alkyl-carbonyl or a C₁₋₆ alkyl-carbonylamino); and,
n is an integer of 0 to 4], or a salt thereof.

2-6. (Canceled)

7. (Previously presented) A 1, 3-benzothiazinone derivative, which is
2-(3-cyanophenyl)-4H-1,3-benzothiazin-4-one,
2-(4-acetylphenyl)-4H-1,3-benzothiazin-4-one,
2-(4-methylsulfonylphenyl)-4H-1,3-benzothiazin-4-one,
2-(4-acetylamino-phenyl)-4H-1,3-benzothiazin-4-one, or
2-(3-trifluoromethylphenyl)-4H-1,3-benzothiazin-4-one.

8-10. (Canceled)

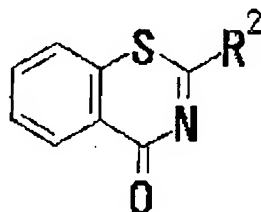
11. (Previously presented) A pharmaceutical composition comprising the compound according to claim 1 and a pharmaceutically acceptable carrier.

12-19. (Canceled)

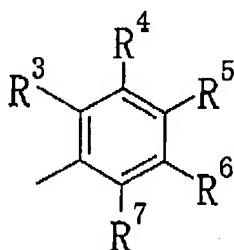
20. (Currently amended) A compound represented by formula:

Application No. 10/537,520
 Supplemental amendment dated March 23, 2009

Docket No.: 68136(46342)



wherein, R^2 represents a group represented by formula:



wherein, one of R^3 and R^7 represents hydrogen atom, and the other is a C_{1-6} alkyl optionally having 1 to 5 substituents selected from the Substituent group A or a C_{1-6} alkoxy optionally selected from the Substituent group A; and R^4 , R^5 and R^6 each represents hydrogen atom; one of R^4 and R^6 represents hydrogen atom, and the other is a bromine atom, cyano, an alkyl having a substituent selected from carboxy, a halogen atom, an alkoxycarbonyl and an arylcarbonylamino, a C_{1-6} alkoxy optionally having 1 to 5 substituents selected from the Substituent group A, an optionally substituted amino or alkoxycarbonyl and R^3 , R^7 and R^5 each represents hydrogen atom; and R^5 represents hydroxy, cyano, an alkyl substituted with a halogen atom, aryl, an acyl, a carbamoyl optionally having 1 or 2 substituents selected from (1') a C_{1-6} alkyl optionally having 1 to 5 substituents selected from the Substituent group A, (2') a C_{2-6} alkenyl optionally having 1 to 5 substituents selected from the Substituent group A, (3') a C_{2-6} alkynyl optionally having 1 to 5 substituents selected from the Substituent group A, (4') a C_{3-8} cycloalkyl optionally having 1 to 5 substituents selected from the Substituent group A, (5') a C_{6-14} aryl optionally having 1 to 5 substituents selected from the Substituent group A, (6') a C_{7-16} aralkyl optionally having 1 to 5 substituents selected from the Substituent group A, (7') a 5- to 14-membered heterocyclic carbonyl containing 1 to 4 hetero atoms, which are 1 or 2 different atoms selected from nitrogen, sulfur and oxygen atoms, in addition to carbon atoms, (8') a C_{1-6} alkyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (9') a C_{2-6} alkenyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (10') a C_{2-6} alkynyl-carbonyl optionally

BOS2 728317.1

Application No. 10/537,520
Supplemental amendment dated March 23, 2009

Docket No.: 68136(46342)

having 1 to 5 substituents selected from the Substituent group A, (11') a C₃₋₈ cycloalkyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (12') a C₆₋₁₄ aryl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A, (13') a C₇₋₁₆ aralkyl-carbonyl optionally having 1 to 5 substituents selected from the Substituent group A and (14') a 5- to 14-membered heterocyclic carbonyl containing 1 to 4 hetero atoms, which are 1 or 2 different atoms selected from nitrogen, sulfur and oxygen atoms, in addition to carbon atoms, or an amino optionally having 1 or 2 substituents selected from (1') a C₁₋₆ alkyl optionally having 1 to 5 substituents selected from the Substituent group A, (2') a C₂₋₆ alkenyl optionally having 1 to 5 substituents selected from the Substituent group A and R³, R⁴, R⁶ and R⁷ each represents hydrogen atom, or a salt thereof,

wherein Substituent group A is (1') a halogen atom, (2') a C₁₋₃ alkylenedioxy (3') nitro, (4') cyano, (5') a C₁₋₆ alkyl which may be substituted with 1 to 5 halogen atoms, (6') a C₂₋₆ alkenyl which may be substituted with 1 to 5 halogen atoms, (7') a carboxy-C₂₋₆ alkenyl, (8') a C₂₋₆ alkynyl which may be substituted with 1 to 5 halogen atoms, (9') a C₃₋₈ cycloalkyl which may be substituted with 1 to 5 halogen atoms, (10') a C₆₋₁₄ aryl, (11') a C₁₋₆ alkoxy which may be substituted with 1 to 5 halogen atoms, (12') a C₁₋₆ alkoxy-carbonyl-C₁₋₆ alkoxy, (13') hydroxyl, (14') a C₆₋₁₄ aryloxy, (15') a C₇₋₁₆ aralkyloxy, (16') mercapto, (17') a C₁₋₆ alkylthio which may be substituted with 1 to 5 halogen atoms, (18') a C₆₋₁₄ arylthio, (19') a C₇₋₁₆ aralkylthio, (20') amino, (21') a mono-C₁₋₆ alkylamino, (22') a mono-C₆₋₁₄ arylamino, (23') a di-C₁₋₆ alkylamino, (24') a di-C₆₋₁₄ arylamino, (25') formyl, (26') carboxy, (27') a C₁₋₆ alkyl-carbonyl, (28') a C₃₋₈ cycloalkyl-carbonyl, (29') a C₁₋₆ alkoxy-carbonyl, (30') a C₆₋₁₄ aryl-carbonyl, (31') a C₇₋₁₆ aralkyl-carbonyl, (32') a C₆₋₁₄ aryloxy-carbonyl, (33') a C₇₋₁₆ aralkyloxy-carbonyl, (34') a 5- or 6-membered heterocyclic carbonyl, (35') carbamoyl, (36') a mono-C₁₋₆ alkyl-carbamoyl, (37') a di-C₁₋₆ alkyl-carbamoyl, (38') a mono-C₆₋₁₄ aryl-carbamoyl, (39') a 5- or 6-membered heterocyclic carbamoyl, (40') a C₁₋₆ alkylsulfonyl, (41') a C₆₋₁₄ arylsulfonyl, (42') formylamino, (43') a C₁₋₆ alkyl-carbonylamino, (44') a C₆₋₁₄ aryl-carbonylamino, (45') a C₁₋₆ alkoxy-carbonylamino, (46') a C₁₋₆ alkylsulfonylamino, (47') a C₆₋₁₄ arylsulfonylamino, (48') a C₁₋₆ alkyl-carbonyloxy, (49') a C₆₋₁₄ aryl-carbonyloxy, (50') a C₁₋₆ alkoxy-carbonyloxy, (51') a mono-C₁₋₆ alkyl-carbamoyloxy, (52') a di-C₁₋₆ alkyl-carbamoyloxy, (53') a mono-C₆₋₁₄ aryl-carbamoyloxy, (54') nicotinoyloxy, (55') a 5- to 7-membered saturated cyclic amino, (56') a 5- to 10-membered aromatic heterocyclic group and (57') sulfo.

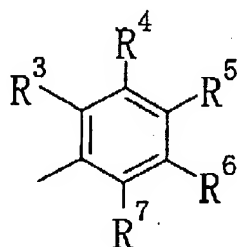
BOS2 728317.1

Application No. 10/537,520
 Supplemental amendment dated March 23, 2009

Docket No.: 68136(48342)

21. (Previously presented) The compound according to claim 20, wherein one of R^4 and R^6 represents hydrogen atom, and the other is bromine atom, (iv) hydroxyl, (v) cyano, (vi) a carboxy-substituted alkyl, (vii) a C_{1-6} alkoxy optionally having 1 to 5 substituents selected from the Substituent group A, or an amino optionally having 1 or 2 substituents selected from (1') a C_{1-6} alkyl optionally having 1 to 5 substituents selected from the Substituent group A, (2') a C_{2-6} alkenyl optionally having 1 to 5 substituents selected from the Substituent group A and R^3 , R^7 and R^5 each represents hydrogen atom.

22. (Previously presented) The compound according to claim 20, wherein, R^2 represents: a group represented by formula:



wherein: (I) one of R^3 and R^7 represents: hydrogen atom, and the other is a C_{1-6} alkyl optionally having 1 to 5 substituents selected from the Substituent group A, wherein Substituent group A consists of a C_{1-6} alkyl-carbonyl optionally having 1 to 5 substituents selected from (1') a halogen atom, (2') a C_{1-3} alkylenedioxy, (3') nitro, (4') cyano, (5') a C_{1-6} alkyl which may be substituted with 1 to 5 halogen atoms, (6') a C_{2-6} alkenyl which may be substituted with 1 to 5 halogen atoms, (7') a carboxy- C_{2-6} alkenyl, (8') a C_{2-6} alkynyl which may be substituted with 1 to 5 halogen atoms, (9') a C_{3-8} cycloalkyl which may be substituted with 1 to 5 halogen atoms, (10') a C_{6-14} aryl, (11') a C_{1-6} alkoxy which may be substituted with 1 to 5 halogen atoms, (12') a C_{1-6} alkoxy-carbonyl- C_{1-6} alkoxy, (13') hydroxyl, (14') a C_{6-14} aryloxy, (15') a C_{7-16} aralkyloxy, (16') mercapto, (17') a C_{1-6} alkylthio which may be substituted with 1 to 5 halogen atoms, (18') a C_{6-14} arylthio, (19') a C_{7-16} aralkylthio, (20') amino, (21') a mono- C_{1-6} alkylamino, (22') a mono- C_{6-14} arylamino, (23') a di- C_{1-6} alkylamino, (24') a di- C_{6-14} arylamino, (25') formyl, (26') carboxy, (27') a C_{1-6} alkyl-carbonyl, (28') a C_{3-8} cycloalkyl-carbonyl, (29') a C_{1-6} alkoxy-carbonyl, (30') a C_{6-14} aryl-carbonyl, (31') a C_{7-16} aralkyl-carbonyl, (32') a C_{6-14} aryloxy-carbonyl, (33') a C_{7-16} aralkyloxy-carbonyl, (34') a 5- or 6-

BOS2 728317.1

Application No. 10/537,520
 Supplemental amendment dated March 23, 2009

Docket No.: 68136(46342)

membered heterocyclic carbonyl, (35') carbamoyl, (36') a mono- C_{1-6} alkyl-carbamoyl, (37') a di- C_{1-6} alkyl-carbamoyl, (38') a mono- C_{6-14} aryl-carbamoyl, (39') a 5- or 6-membered heterocyclic carbamoyl, (40') a C_{1-6} alkylsulfonyl, (41') a C_{6-14} arylsulfonyl, (42') formylamino, (43') a C_{1-6} alkyl-carbonylamino, (44') a C_{6-14} aryl- carbonylamino, (45') a C_{1-6} alkoxy-carbonylamino, (46') a C_{1-6} alkylsulfonylamino, (47') a C_{6-14} arylsulfonylamino, (48') a C_{1-6} alkyl-carbonyloxy, (49') a C_{6-14} aryl-carbonyloxy, (50') a C_{1-6} alkoxy-carbonyloxy, (51') a mono- C_{1-6} alkyl-carbamoyloxy, (52') a di- C_{1-6} alkyl-carbamoyloxy, (53') a mono- C_{6-14} aryl-carbamoyloxy, (54') nicotinoyloxy, (55') a 5- to 7-membered saturated cyclic amino, (56') a 5- to 10-membered aromatic heterocyclic group and (57') sulfo; a C_{1-6} alkoxy optionally having 1 to 5 substituents selected from Substituent group A;

and R^4 , R^5 and R^6 each represents hydrogen atom; or

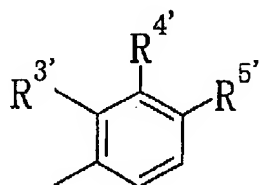
(II) one of R^4 and R^6 each independently represents:

hydrogen atom; and

the other is bromine atom; cyano; a C_{1-6} alkyl having 1 to 3 substituents selected from carboxy, a halogen atom, a C_{1-6} alkoxy-carbonyl and a C_{6-14} aryl-carbonylamino; a C_{1-6} alkoxy optionally having 1 to 5 substituents selected from the Substituent group A, an amino having a C_{1-6} alkyl-carbonyl, a C_{1-6} alkoxy-carbonyl or

(III) R^5 represents: hydroxy; cyano; a C_{1-6} alkyl substituted with 1 to 5 halogen atoms; a C_{6-14} aryl; a C_{1-6} alkyl-carbonyl; a carbamoyl having 2 C_{1-6} alkyl groups or an amino having a C_{1-6} alkyl-carbonyl group.

23. (Previously presented) The compound according to claim 20, wherein R^2 is a group represented by formula:



(wherein (1) $R^{3'}$ represents a C_{1-6} alkoxy or a C_{1-6} alkyl substituted with 1 to 5 halogen atoms, and $R^{4'}$ and $R^{5'}$ each represents hydrogen atom; (2) $R^{4'}$ represents bromine atom, cyano, a C_{1-6} alkyl having 1 to 3 substituents selected from carboxy, a halogen atom, a C_{1-6} alkoxy-carbonyl and a C_{6-14} aryl-carbonylamino, a C_{1-6} alkoxy substituted with a C_{1-6} alkoxy-carbonyl or a C_{1-6} alkyl-

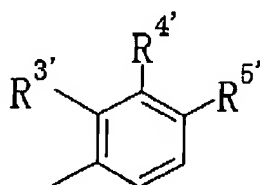
BOS2 728317.1

Application No. 10/537,520
 Supplemental amendment dated March 23, 2009

Docket No.: 68136(46342)

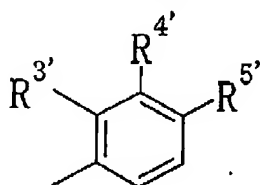
carbonylamino, and $R^{3'}$ and $R^{5'}$ each represents hydrogen atom; or (3) $R^{5'}$ represents hydroxy, cyano, a C_{1-6} alkyl substituted with 1 to 5 halogen atoms, a C_{6-14} aryl, a C_{1-6} alkyl-carbonyl, a di- C_{1-6} alkylcarbonyl or a C_{1-6} alkyl-carbonylamino, and $R^{3'}$ and $R^{4'}$ each represents hydrogen atom).

24. (Previously presented) The compound according to claim 23, wherein R^2 is a group represented by formula:



(wherein (1) $R^{3'}$ represents a C_{1-6} alkoxy or a C_{1-6} alkyl substituted with 1 to 5 halogen atoms, and $R^{4'}$ and $R^{5'}$ each represents hydrogen atom; (2) $R^{4'}$ represents bromine atom, cyano, a C_{1-6} alkyl having 1 to 3 substituents selected from carboxy, a halogen atom, a C_{1-6} alkoxy-carbonyl and a C_{6-14} aryl-carbonylamino, a C_{1-6} alkoxy substituted with a C_{1-6} alkoxy-carbonyl or a C_{1-6} alkyl-carbonylamino, and $R^{3'}$ and $R^{5'}$ each represents hydrogen atom; or (3) $R^{5'}$ represents hydroxy, cyano, a C_{1-6} alkyl substituted with 1 to 5 halogen atoms, a C_{6-14} aryl, a C_{1-6} alkyl-carbonyl, a di- C_{1-6} alkylcarbonyl or a C_{1-6} alkyl-carbonylamino, and $R^{3'}$ and $R^{4'}$ each represents hydrogen atom.

25. (Previously presented) The compound according to claim 23, wherein R^2 is a group represented by formula:



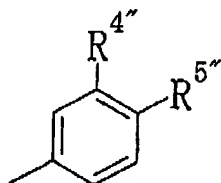
(wherein (1) $R^{3'}$ represents a C_{1-6} alkyl substituted with 1 to 5 halogen atoms, and $R^{4'}$ and $R^{5'}$ each represents hydrogen atom; (2) $R^{4'}$ represents cyano, a C_{1-6} alkyl having 1 to 3 substituents selected from carboxy, a halogen atom, a C_{1-6} alkoxy-carbonyl and a C_{6-14} aryl-carbonylamino, a C_{1-6} alkoxy substituted with a C_{1-6} alkoxy-carbonyl or a C_{1-6} alkyl-carbonylamino, and $R^{3'}$ and $R^{5'}$ each represents hydrogen atom; or (3) $R^{5'}$ represents cyano, a C_{1-6} alkyl substituted with 1 to 5 halogen atoms, a C_{6-14} aryl or a C_{1-6} alkyl-carbonylamino, and $R^{3'}$ and $R^{4'}$ each represents hydrogen atom.

BOS2 728317.1

Application No. 10/537,520
Supplemental amendment dated March 23, 2009

Docket No.: 68136(46342)

26. (Previously presented) The compound according to claim 20, wherein R^2 is a group represented by formula:



(wherein (1) $R^{4''}$ represents cyano and $R^{5''}$ represents hydrogen atom, or (2) $R^{4''}$ represents hydrogen atom and $R^{5''}$ represents a C_{1-6} alkyl-carbonyl or a C_{1-6} alkyl-1 carbonylamino).

27. (Previously presented) A pharmaceutical composition comprising the compound according to claim 20 and a pharmaceutically acceptable carrier.

28. (Canceled)

29. (Canceled)